Health Research in Action:

A Framework for Building Capacity
to Share and Use Health Research

April, 2007

Building a healthy Saskatchewan through health research

Saskatchewan
Health Research
FOUNDATION

www.shrf.ca

About SHRF

The Saskatchewan Health Research Foundation (SHRF) is the provincial agency responsible for funding, facilitating and promoting health research in Saskatchewan. This includes leading the implementation of Saskatchewan's *Health Research Strategy* (2004).

For details about SHRF's mandate, activities, board and staff, and the provincial *Health Research Strategy*, please visit our Web site.

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Table of Contents

Executive Summary

Saskatchewan's *Health Research Strategy*

Ensuring that research leads to benefits for health, the health system, and society is a major theme in Saskatchewan's *Health Research Strategy* (2004), the province's long-term vision for health research. Achieving this goal involves a process known as knowledge translation. This process is known by many names, which are often the subject of much debate. What is not debatable is the importance of sharing and using research—both existing and new—for improvement. Governments, agencies and individuals who support research expect that their investments will make a positive difference.

A key action item in the Strategy called for the Saskatchewan Health Research Foundation (SHRF) to lead the development of a provincial framework for increasing Saskatchewan's knowledge translation capacity related to health research. While SHRF is responsible for leading the *Health Research Strategy's* implementation, its success depends on the commitment and collaboration of individuals and agencies throughout the province. Therefore, in doing this work on knowledge translation, we collaborated with the universities, the Health Quality Council, government, health regions, community organizations and charitable agencies, all represented on the project's advisory committee.

Scope of the Issue

The research world is without geographic boundaries and research done anywhere can have influence in many jurisdictions. As is now common in Canada, health research is defined broadly as including biomedical science, clinical research, health systems and policy research, and research into the social, cultural and environmental determinants of population health. Within these areas, research can range from basic and fundamental to applied and community-based work and can be done from a wide range of perspectives and methodologies.

Given the differences in kinds of health research and the ways that different agencies and individuals are involved in health research, knowledge translation can mean many things to many people, each equally valid and important. Adding to the complexity of the issue, researchers have the major responsibility for generating ethical and credible research while navigating complex systems that don't always recognize or reward knowledge translation activities. Organizations and individuals often make decisions in complex environments where the latest research is just one of many factors that contribute to decision-making.

With all this complexity and diversity it's no wonder that there are so many agencies and individuals working on refining the area to suit different needs and perspectives. Many national and international agencies have made sharing and using health research (knowledge translation) a priority, as well as organizations in this province. In the background research and consultations for this project we found out about agencies and people who are already actively engaged in connecting research and practice across multiple sectors, working with different groups and different kinds of health research.

Building the Framework

In building the framework, we consulted broadly, holding focus groups in various communities and with individuals from a range of positions and sectors. When we asked participants to talk about sharing and using health research in their day-to-day work (rather than the more formal term "knowledge translation"), the conversations got rolling quickly and produced a wealth of ideas and examples. We also asked for success stories and concrete suggestions for improvement.

Because context is such a huge factor in understanding needs, roles and expectations in knowledge translation, we structured focus groups using a "role-based" perspective, i.e., grouped individuals with some common ground (see page 7). In addition to different perspectives based on each group's interest, the process uncovered five common themes: 1) People are Key; 2) Issues in Sharing Health Research; 3) Issues in Using Health Research; 4) Tools to Support Process; and 5) It's the System!

The Framework

Using the findings and suggestions from the focus groups, we drafted a set of strategic directions that were shared with our advisory committee and at a workshop for consideration and feedback. All of this input provided a rich set of components for building the framework presented in the last section of this document. It consists of three components:

a) guiding principles;
b) strategic directions and actions; and
c) implementation guidelines.

This framework, with its guiding principles and its strategic directions and actions, is a tool to facilitate joint planning and action for strengthening knowledge translation capacity. The framework will be shared broadly, focusing on ways that different organizations can use their existing strengths and unique positions in the province to build capacity to share and use health research.

Laying the Foundation

Ensuring that research leads to benefits for health, the health system, and society is a major theme in Saskatchewan's *Health Research Strategy* (2004), the province's long-term vision for health research. Achieving this goal involves a process known as knowledge translation. This process is known by many names, which are often the subject of much debate. What is not debatable is the importance of sharing and using research—both existing and new—for improvement. Governments, agencies and individuals who support research expect that their investments will make a positive difference.

This is no doubt why the theme emerged so prominently from research and consultations that led to Saskatchewan's *Health Research Strategy*. Those wide consultations included individuals, organizations, and communities in Saskatchewan, such as the universities, the health system, community-based organizations, charitable agencies, civic leaders, and business leaders. Four major themes evolved: advancing health research priority areas; applying what we learn, or knowledge translation; building health research capacity; and tracking progress and impact. Knowledge translation, while a distinct theme, is an integral aspect of the other themes.

A key action item in the Strategy called for the Saskatchewan Health Research Foundation (SHRF) to lead the development of a provincial framework for increasing Saskatchewan's knowledge translation capacity related to health research. While SHRF is responsible for leading the *Health Research Strategy's* implementation, its success depends on the commitment and collaboration of individuals and agencies throughout the province. Therefore, in doing this work on knowledge translation, we collaborated with the universities, the Health Quality Council, government, health regions, community organizations and charitable agencies, all represented on the project's advisory committee.
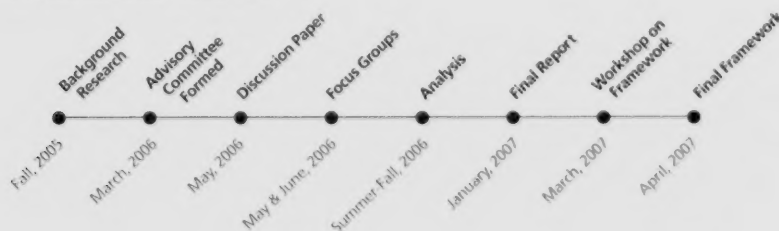
In building the framework, we again consulted broadly, holding focus groups in various communities and with individuals from a range of positions and sectors. When we asked participants to talk about sharing and using health research in their day-to-day work (rather than the more formal term "knowledge translation"), the conversations got rolling quickly and produced a wealth of ideas and examples. We also asked for success stories and concrete suggestions for improvement. Carrying the project's focus of *building* capacity into our analysis, we used the analogy of "building blocks" for things that worked well and "stumbling blocks" for things that needed improvement.

Using the findings and suggestions from the focus groups, we drafted a set of strategic directions that were shared with our advisory committee and at a workshop for consideration and feedback. All of this input provided a rich set of components for building the framework presented in the last section of this document.

In our consultations, we didn't limit the definition of health research but defined it very broadly. The research world is without geographic boundaries and research done anywhere can have influence in many jurisdictions. As is now common in Canada, health research was defined broadly as including biomedical science, clinical research, health systems and policy research, and research into the social, cultural and environmental determinants of population health. Within these areas, research can range from basic and fundamental to applied and community-based work and can be done from a wide range of perspectives and methodologies.

Before outlining the framework, this document presents highlights of our background research, describes our consultation process (focus groups and final workshop) and presents the findings of our analysis. This is important context for the framework, grounding it in work done by others before us and in the rich input we heard from our focus group and workshop participants.

Project Steps and Timelines

Background Research	Advisory Committee Formed	Discussion Paper	Focus Groups	Analysis	Final Report	Workshop on Framework	Final Framework
Fall, 2005	March, 2006	May, 2006	May & June, 2006	Summer-Fall, 2006	January, 2007	March, 2007	April, 2007

1

Building on Work Already Done

Saskatchewan is not alone in facing the challenge of knowledge translation. Nationally, the Commission on the Future of Health Care in Canada (2002) recommended stronger attention to applying research knowledge, particularly in certain pressing health areas. The Canadian Institutes of Health Research and the Canadian Health Services Research Foundation, both major national research support agencies, have been developing and defining this area and are funding research in the field.

Agencies in other provinces, like the Alberta Heritage Foundation for Medical Research, the Nova Scotia Health Research Foundation, the Michael Smith Foundation for Health Research (B.C.), and the Manitoba Centre for Health Policy, are also working on knowledge translation. Internationally, the Global Forum for Health Research and the World Health Organization have also highlighted the importance of research use.

Saskatchewan's strengths in this area include a history of encouraging research-based decision-making in health, with early leadership from the Health Services Utilization and Research Commission and now from the Health Quality Council. The province's health authorities and the provincial health department are very keen to advance this work, as are many other service agencies and community organizations.

The province's universities play a key role in producing and sharing research with various communities. A few of the many examples include: Industry Liaison Offices working with researchers and businesses to facilitate the commercialization of research; the Community-University Institute for Social Research working with communities to facilitate relevant and useful community research; and the Indigenous Peoples' Health Research Centre (IPHRC) playing a lead role in exploring knowledge translation in Indigenous contexts. IPHRC scholars and community facilitators are doing important work in the field of knowledge translation as it relates to research and to Indigenous knowledge more broadly (e.g., Ermine et al., 2004; IPHRC, 2005; and Kaplan-Myrth and Smylie, 2006).

Participants at SHRF's Health Research Summit in 2004, which launched the *Health Research Strategy*, identified several Saskatchewan strengths on which to build: strong sense of community; good use of partnerships and collaborations; keen interest in health and health research; history of leading health system change; and many top-notch researchers in a variety of settings.

2

What do we mean by "Knowledge Translation?"

This section describes our understanding of knowledge translation, based on the many articles and materials reviewed as a first step in the project, which included writing our discussion paper, entitled *"Health Research in Action: Towards a Provincial Framework."* We have referenced some of the key articles here but recognize that there is a very large body of literature on the subject.

The literature on knowledge translation can be challenging to navigate, given that it is still finding its way historically and philosophically (Estabrooks, 1999) and that studies in the area can be found in diverse disciplines (Landry et al., 2001). The literature can also be confusing because there are many variations on the term knowledge translation. For example, the Canadian Health Services Research Foundation (2006) identified over 20 different terms used by health research funding agencies to describe work in the area of knowledge translation.

Knowledge translation applies to many agencies and individuals in different and complex ways. Given the differences in kinds of health research and the ways that different agencies and individuals are involved in health research, knowledge translation can mean many things to many people, each equally valid and important. Knowledge translation is not a one-time event or a one-way process (Rich, 1991; 1997). It involves interaction and complex exchanges (Lomas, 1997; Stone et al., 2001) among research organizations, universities, governments, regional health authorities, community-based organizations, business enterprises and funders.

Some organizations and individuals might be cautious about knowledge translation related to research because it can be seen as an intention to replace all forms of knowledge with research knowledge. There are many other kinds of knowledge and there are organizations and individuals working on knowledge translation in those areas. We don't see research as a replacement but as one very important resource.

The Canadian Institutes of Health Research (CIHR), Canada's primary health research funding agency, developed a definition of knowledge translation through extensive research and consultation. CIHR's (2005) definition captures our general understanding of knowledge translation and its complexity:

Knowledge translation is the exchange, synthesis and ethically-sound application of knowledge – within a complex system of interactions among researchers and users – to accelerate the capture of the benefits of research for Canadians through improved health, more effective services and products, and a strengthened health care system.

Some examples of Knowledge Translation:

- policy development using research knowledge
- publication in a peer-reviewed journal
- publishing a "best practice"
- research knowledge used by the community to improve health and well-being
- development of a product or invention based on health research
- front-line clinicians applying research knowledge in practice
- front-line community agencies using research to improve services

3

The Diversity and Complexity of Knowledge Translation

The research world is without geographic boundaries and research done anywhere can have influence in many jurisdictions. As is now common in Canada, health research is defined broadly as including biomedical science, clinical research, health systems and policy research, and research into the social, cultural and environmental determinants of population health. Within these areas, research can range from basic and fundamental to applied and community-based work and can be done from a wide range of perspectives and methodologies.

Research is not produced in a vacuum, and it's not shared and used in one either. Researchers have the major responsibility for generating ethical and credible research while navigating complex systems that don't always recognize or reward knowledge translation activities. Organizations and individuals often make decisions in complex environments where the latest research is just one of many factors that contribute to decision-making.

Expectations and timelines are fundamental to understanding the knowledge translation process. There is sometimes an expectation that each and every study should lead to immediate benefit. In reality, research studies generally contribute to building or confirming knowledge, and the timelines may be long between findings and application – in some instances, decades. That's why researchers' traditional approaches of publishing and conference attendance remain critically important to knowledge translation. They contribute knowledge for future advancements and ensure that the knowledge is in the public domain, available and accessible for addressing challenging health issues. In other words, research that is done to build a foundation for future work is just as important as applied research (Lavis et al., 2006).

The processes of sharing and using health research vary depending on different types of research and different contexts. For example, in population health research, the end goal is often social policy change; in clinical research, it may be deciding whether one treatment works better than another; in biomedical science, it is likely the development of a new medicine or device; and in health services research, it is usually procedural change for improving service quality.

The processes also vary according to organizations' roles, capabilities and resources. For example, in research agencies the goal is to produce high-quality research or to strategically fund and produce relevant and timely research; in health and government organizations, research likely relates to the adoption of best practices and making informed decisions that ensure an efficient and effective health system; in biotechnology and commercial organizations, knowledge translation is related to producing better products and economic benefits; community and non-government organizations may be involved in research to improve client support and education. Institutions interested in adopting best practices or developing new services and products usually need to invest in personnel who can find, interpret and synthesize research to produce effective and innovative solutions. Adding to the complexity, what is a benefit for one sector may in fact be a cost to another.

There are opportunities for sharing and using health research at various stages of research, from the earliest idea stages to the results stages and beyond, when research is freely available in the public domain. Sharing and using health research occurs in a complex environment of connections and interactions among and between individuals, sectors and tools. Other considerations include different cultures and values, jurisdictional issues and regulatory requirements. Figure 1 captures the complexity and interconnectedness essential to effective knowledge translation – a complex system indeed!

Figure 1: Components of Knowledge Translation

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The figure is a large circular diagram. The outer ring reads: **HEALTH**, **WELL-BEING**, **SOCIETY**, **ECONOMY**, **HEALTH-CARE**.

People
- Health Service Workers
- Health Policy Makers
- Health Researchers
- Health Administrators
- Information Experts (Librarians, Professional Communicators, Journalists, Information Technology Experts)
- Patients & Families
- The Public
- Business People

Sectors
- University and other Educational Institutions
- Health Service Organizations
- Health Professional Associations
- Government Departments
- Private/Industry
- Community and Non-Government Organizations
- Funding Agencies

Inner ring: Sharing and Using Research

Health Research Areas
- Clinical
- Biomedical
- Health Systems & Policy
- Population Health

Tools
- Library Resources and Services
- Media
- Information Technology
- Best Practices
- Internet Resources
- Networks

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Building the Framework

Recognizing the complexity of sharing and using health research, we moved ahead with our project for developing a provincial framework to build capacity for knowledge translation related to health research. We were guided by the following questions posed in the provincial *Health Research Strategy*:

How do we ensure that the knowledge gained from health research is used to the fullest?

What are the best mechanisms for sharing research results with the general public, health care providers, health policy makers, commercial enterprises, and other researchers who would benefit from this work?

How can we ensure researchers are aware of the research needs of these users, so they can respond to emerging issues and priorities?

The Team

Our project advisory committee (see membership in Appendix A) was instrumental in shaping the project and providing guidance at each stage. Specifically, the committee provided advice on the discussion paper and final report, data collection method, participant selection, interpretation of results, workshop planning, and developing the framework's strategic directions. The committee included individuals from various Saskatchewan communities, one member from Alberta, and from many health-related areas. Members were from rural and urban sectors, the province's universities, community and non-government organizations, commercialization and biotechnology industry, the Health Quality Council, the Indigenous Peoples' Health Research Centre, several health regions and the Saskatchewan government. It was most ably chaired by Liz Harrison, a recognized and accomplished researcher, educator and health professional.

We also benefited from the services of external consultants. Colleen Zubkow played an instrumental role in planning and facilitating the Health Research in Action Workshop, in addition to facilitating all of the focus groups and contributing to data analysis.

Alexa Briggs was SHRF's project lead. She organized all advisory committee meetings and focus groups, co-ordinated the workshop, conducted the data analysis, and led the writing and production of the discussion paper, final report and framework. Other SHRF staff provided feedback on the discussion paper, the final report and framework, and contributed to planning the workshop. SHRF's CEO contributed to all aspects of the project. The SHRF Board provided overall direction and approved resources for this important project.

Collecting Input

How can Saskatchewan build its knowledge translation capacity related to health research? In other words, what does Saskatchewan need to do to ensure it has strong capacity to share and use research results to improve health and health care in the province?

On advice from the advisory committee and our external consultants, we chose a method that included focus groups to gather input for developing the framework, followed by a provincial workshop in March 2007 to provide feedback and validation and to build consensus around the roles and expectations in the framework.

We held twelve focus groups, in May and June 2006, of approximately 8-10 people in each with a total of 105 people participating. A participant list was generated using recommendations from the Advisory Committee. All participants were invited by e-mail or telephone. The focus groups were structured using a role-based perspective, i.e., grouped individuals with some common ground. Table 1 describes the location of the groups and the commonality in each.

To help facilitate discussion we mailed a copy of the discussion paper to participants prior to the focus group sessions. It explained the overall goal of the project, outlined various aspects of a concept that many people define in different ways and provided participants with questions to consider.

At each session, SHRF's CEO gave an introductory presentation about the scope and importance of the project and a trained facilitator then led the discussions. The sessions were all audio-recorded after obtaining consent from participants, as a back-up for the notes taken by two SHRF staff members.

We asked our focus group participants to share their views about how we can improve access to and use of health research. The "Focus Group Interview Guide"

in Appendix C outlines our focus group process. Specifically, we encouraged people to talk about their experiences that give unique insight into:

- existing strengths in sharing and using health research;
- examples of success stories in sharing and using research and why they work;
- challenges or gaps that need addressing; and
- actions or strategies that would help increase capacity to use research.

Table 1: Focus Group Breakdown

Location	Role-Commonality
Saskatoon	Population Health and Health System Researchers
	Biomedical and Clinical Researchers
	People involved in Commercialization
	Front-line and Management: Urban Health Region
	Information and Communication Experts
Regina	Population Health Researchers
	People Working in Charitable Agencies
	Policy-Makers
	Front-line and Management: Urban Health Region
Yorkton	Front-line and Management: Rural Health Region
Swift Current	Front-line and Management: Rural Health Region
Prince Albert	Front-line and Management: Northern Health Region

For a list of organizations invited to attend, please see Appendix B.

Data Analysis

Focus group data was aggregated using thematic analysis to identify common themes among the groups and narrative is used to describe individual groups.

Data analysis occurred from June to September, 2006. Results are presented in the following section.

Different Views

We structured the groups using a role-based perspective on the premise that there is something unique about the way that different people view the role of research. We wanted to provide individuals in each group with some common ground from which to discuss this complex topic. The technique was effective and generated lively conversations. Participants recognized the importance and scope of the issue and willingly shared their many experiences. These engaging discussions reinforced that there is already a lot of knowledge translation activity occurring and it's important to acknowledge it in its many forms.

Even though we did thematic analysis to highlight common themes, we would be remiss if we didn't also describe some of the differences that emerged. The next few paragraphs elaborate on some of the unique perspectives and issues that emerged from different groups. One of the main lessons reinforced from this experience is that where people sit in the vast health system determines how they'll think about knowledge translation and the role of health research. Even among researchers there were differences in knowledge translation issues.

The **biomedical research group** mentioned using mechanisms like public lectures or information sessions to share with the public, patents to make research applicable and communicating with clinicians to try and influence practice. Group members also discussed challenges related to intellectual property and in connecting with clinicians to influence practice.

Population health and clinical researchers saw their role in sharing research as working directly with communities, often by participatory research methods. They often discussed ethical principles of working with different communities, the value in community knowledge and principles of community-owned research. Population health researchers identified that the time and effort that goes into involving communities in research is often unrecognized in academia.

Population health and clinical researchers also recognized that various individuals with whom they connect may be unrewarded or actively discouraged from participating in research projects that could prove beneficial. Clinical researchers also expressed the challenges of being both clinicians and researchers because research time is not always protected, or is protected in name only.

The commercialization group members focused on the potential of research to create new products and other commercial applications. They also observed that intellectual property policies can create barriers to the commercialization process, resulting in lost opportunities.

Community organizations and **people from health regions** discussed the social determinants of health at length. They identified the social determinants of health as directly affecting health and well-being and needing immediate action and attention. While both health regions and community-based organizations recognized the gap in attention to the social determinants of health, community-based organizations saw the work they do as directly related to the social determinants of health. They expressed interest in doing more with system partners and felt that their organizations' health and social services were sometimes overlooked in their importance to health.

Workers in health regions told us that they are "on the ground" using research to impact patient care directly in a way that will improve continuity of care. The focus groups in the bigger regions discussed sharing data and best practices from their regions while the smaller regions often discussed wanting to tap into the resources of the bigger regions because they don't have the same kinds of resources.

Policy-makers expressed interest in developing a cohesive approach to sharing and using health research for the province but identified challenges in operating at all levels, due to many similar issues noted by the other groups. They also talked about the need for connecting across regions more effectively to share best practices, policies, and information resources.

Information experts expressed an interest in using their expertise to manage and share information to help researchers, the public and policy-makers. They shared many creative ideas on ways to share research but felt that their expertise was not always fully realized or used.

The results of this project only reflect the voices of the people who attended the focus groups. Perspectives of clinicians and Aboriginal people were underrepresented relative to the participant group targeted and invited.

The following pages present the five common themes in detail. Continuing the report's theme of building, we use "building blocks" to describe elements that focus group participants felt enabled knowledge translation and "stumbling blocks" to describe elements they felt hindered knowledge translation.

During the focus groups we heard many insightful comments about both the successes and the frustrations of knowledge translation. We present some of these examples and comments that underline the key messages of each theme.

8

Common Ground

Theme 1: People are Key

All of the groups identified people who are already doing this work and emphasized that increasing capacity to share and use health research will depend on adding more of these people, training and supporting people in sharing and using health research, and creating or enhancing specialist positions.

Of course, depending on the group we were talking to, different people and skill sets were emphasized as important in knowledge translation. For example, researchers identified professional communicators as key to sharing and using health research but groups in health regions identified people like research officers as key.

Building Blocks

1) Having people to facilitate sharing and using health research such as:
   - librarians
   - research officers
   - liaison officers
   - technology transfer officers
   - policy analysts
   - professional communicators
   - information technology specialists
   - quality of care co-ordinators

2) Having personnel with expertise in:
   - communications
   - adult education
   - finding, interpreting, and synthesizing research
   - connecting and engaging multiple stakeholders

3) Having people who draw attention to the importance of health research, particularly:
   - physician champions
   - leaders in health regions who believe in using health research

"The fact that we have a librarian in our region now is [an improvement] because she can link us to databases and find information for us and we never really had that ability before."
(Dietician)

Stumbling Blocks

1) Not enough support for people to seek out training or continuing education opportunities related to research

2) Lack of people who have the skills to find, interpret, and synthesize research

3) Lack of personnel who have the responsibility for, and the skills to, support sharing and using health research

"Who will synthesize all the knowledge? We don't have a research officer in our [health] region."
(Manager in health region)

"Having people who can understand and synthesize down into something I can understand is critical—it's like a key to the knowledge."
(Front-line population health worker)

Examples of Success

A researcher indicated that including a professional communicator on the research team made a huge impact in terms of effectively sharing information with various stakeholders.

Someone from a community-based organization described how valuable it was to work directly with a university researcher who was willing to share his results directly with the community.

"Knowledge transfer, knowledge translation have become buzz words and all granting councils and pretty well all research funding agencies subscribe to the concept and then require researchers in their proposals to [describe] how they are going to translate to the public or disseminate their findings... that in itself is a specialty and a lot of people don't know how to do it."
(Information Specialist)

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(Information Specialist)

Theme 2: Issues in Sharing Health Research

Participants discussed some of the strengths and challenges they face in sharing research. It wasn't only academic researchers who were eager to share research but also researchers in health regions and other organizations that collect data and conduct their own research projects. All of these people were passionate about their work: they want to share it with others who may find use in the work they've done and they want see it improve health and health care.

Academic researchers discussed the value of their work for particular populations or individuals. Researchers in health organizations discussed building on or learning from work in other organizations to develop and share best practices to limit the amount of duplication.

Building Blocks

1) Creative sharing methods like:
   - peer presentations
   - art
   - face-to-face interactions
   - videos
   - best practices
   - photos
   - clear language reports

2) Connecting with stakeholders by:
   - involving stakeholders in the research process, as appropriate
   - recognizing and building on the strengths of stakeholders
   - recognizing opportunities to make small changes
   - using culturally appropriate methods of communication

3) Using print and TV media for promotion and dissemination

4) Building relationships through:
   - informal networks
   - interdisciplinary teams
   - community/university partnerships
   - student placements in the community
   - attendance at conferences
   - involvement in committee meetings and professional associations

"It actually became a catalyst, this [statistical] data. For us, it's statistics that back up what [our organization] actually sees but for the health region it was something that they needed to say 'we need to do something about this.' This data has drawn attention [to a key issue] in a matter of months that would have taken us years to do."
(Worker in a community-based organization)

Stumbling Blocks

1) Researchers lack support in:
   - training to share research outside of academic community
   - recognition or prestige for sharing research outside academia
   - funding to support sharing research

2) By the time researchers get findings they can be outdated

3) Health coverage in media has diminished and it's often negative news that gets most publicity

4) Multiplicity of stakeholders can make priority-alignment challenging

5) Community caution of research and researchers

6) Lack of mechanisms to connect:
   - rural health regions to universities
   - among health regions

"Are we getting impact for the dollars that are budgeted in all of those [research] proposals for knowledge transfer? Nobody's really looking at that in a coordinated way. Is that the best way to get the knowledge transferred? I really wonder about the impact of all these little bits of money out there."
(Information Specialist)

Examples of Success

The University of Saskatchewan has produced numerous promotional videos, profiling research and researchers in an easy-to-understand and engaging style, which are aired for the general public.

Several participants described the success of *In motion* as an initiative based on research evidence that has resulted in positive changes in healthy lifestyle choices.

The universities' continuing education programs provide research-based learning opportunities for health professionals.

The Saskatchewan Health Research Foundation has a Research Connections Program, providing funding for conferences and workshops with the purpose of sharing health research knowledge.

"When [health care] providers are sharing, the room is packed."
(Clinician educator)

Theme 3: Issues in Using Health Research

Even if research findings are created and shared in a way that supports research use, there is no guarantee that they will be applied. Groups identified some of the major strengths and challenges in using health research. In general, people expressed an eagerness to use health research but also told us that it's not always easy to find and assess the research they need.

Building Blocks

1) Organizational support to:
   • take time to find, interpret and apply research
   • attend conferences

2) Access to credible sources of information (that all convey the same message) like:
   • reputable organizations
   • published best practices

3) Being able to evaluate what's already being done

4) Recognizing the value of research in:
   • using it as leverage
   • revealing gaps and identifying issues
   • getting something written down

"[Clinicians] might be less afraid of research if they realize that every day when you're making a clinical judgment you're using your own research skills based on your experience."
(Clinician)

"There is so much research out there. It's overwhelming at times and it can be difficult to determine what evidence we're going to take action on and what we don't."
(Front-line Manager)

"There is a systematic lack of recognition about what information can do for you. Senior management have to start to recognize that [organizations] need to be staffed so that they can spend some time on research."
(Information Specialist)

"Access to information is going to kill us."
(Front-line Manager)

Stumbling Blocks

1) Lack of time specifically designated to find and interpret research

2) Difficulty in assessing and interpreting research because:
   • there is an overwhelming amount of research
   • information can be conflicting
   • grey literature can be difficult to find and assess
   • it has too much jargon

3) Lack of mechanisms to measure outcomes and evaluate

4) Resistance to change

"People need to realize that there's all kinds of research that exists, we don't need to keep going over and over it again."
(Population Health Researcher)

Examples of Success

A manager in her region needed to convince a physician that a different practice from the one that he was currently following would be beneficial for patients. So, she asked the librarian in her region to find and summarize articles related to the practice; the results supported a change in the physician's practice. The manager was then able to present this information at a staff meeting where, as a group, they discussed the issue and could see the benefits of changing practice. The physician and the rest of the staff left the meeting with a clear understanding and acceptance of the change.

Many participants identified the Health Quality Council Collaboratives as an example of success in sharing and using best practices to improve quality of care.

One participant described a situation where the community used data as part of a strategy to convince the municipality that the community needed a shelter for battered women. It took time and involvement from many different sectors to prove that there was in fact an issue before a shelter was eventually put in place.

Theme 2: Issues in Sharing Health Research

Participants discussed some of the strengths and challenges they face in sharing research. It wasn't only academic researchers who were eager to share research but also researchers in health regions and other organizations that collect data and conduct their own research projects. All of these people were passionate about their work: they want to share it with others who may find use in the work they've done and they want see it improve health and health care.

Academic researchers discussed the value of their work for particular populations or individuals. Researchers in health organizations discussed building on or learning from work in other organizations to develop and share best practices to limit the amount of duplication.

Building Blocks

1) Creative sharing methods like:
   - peer presentations
   - art
   - face-to-face interactions
   - videos
   - best practices
   - photos
   - clear language reports

2) Connecting with stakeholders by:
   - involving stakeholders in the research process, as appropriate
   - recognizing and building on the strengths of stakeholders
   - recognizing opportunities to make small changes
   - using culturally appropriate methods of communication

3) Using print and TV media for promotion and dissemination

4) Building relationships through:
   - informal networks
   - interdisciplinary teams
   - community/university partnerships
   - student placements in the community
   - attendance at conferences
   - involvement in committee meetings and professional associations

"It actually became a catalyst, this [statistical] data. For us, it's statistics that back up what [our organization] actually sees but for the health region it was something that they needed to say 'we need to do something about this.' This data has drawn attention [to a key issue] in a matter of months that would have taken us years to do."
   (Worker in a community-based organization)

Stumbling Blocks

1) Researchers lack support in:
   - training to share research outside of academic community
   - recognition or prestige for sharing research outside academia
   - funding to support sharing research

2) By the time researchers get findings they can be outdated

3) Health coverage in media has diminished and it's often negative news that gets most publicity

4) Multiplicity of stakeholders can make priority-alignment challenging

5) Community caution of research and researchers

6) Lack of mechanisms to connect:
   - rural health regions to universities
   - among health regions

"Are we getting impact for the dollars that are budgeted in all of those [research] proposals for knowledge transfer? Nobody's really looking at that in a coordinated way. Is that the best way to get the knowledge transferred? I really wonder about the impact of all these little bits of money out there."
   (Information Specialist)

Examples of Success

The University of Saskatchewan has produced numerous promotional videos, profiling research and researchers in an easy-to-understand and engaging style, which are aired for the general public.

Several participants described the success of *In motion* as an initiative based on research evidence that has resulted in positive changes in healthy lifestyle choices.

The universities' continuing education programs provide research-based learning opportunities for health professionals.

The Saskatchewan Health Research Foundation has a Research Connections Program, providing funding for conferences and workshops with the purpose of sharing health research knowledge.

"When [health care] providers are sharing, the room is packed."
   (Clinician educator)

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Theme 4: Tools to Support Process

All of the groups identified tools or actual physical things that support sharing and using health research. When tools were discussed people were quick to point out that although tools have made access to information and other people easier, people still need training and a genuine appreciation to make the tools useful and meaningful.

Building Blocks

1) Information technology (IT) tools like:
   - Personal Digital Assistants/Blackberries
   - Teleconferences
   - Telehealth
   - Easy-to-read reports

2) Library resources and services

3) Internet resources like:
   - Web CT
   - webinars
   - databases
   - chatrooms
   - access to Web sites
   - e-learning events
   - webcasts
   - list serves

"I've talked with other librarians and a common theme is 'we don't have time to take advantage of your time-saving service'."

(Librarian)

Stumbling Blocks

1) Lack of funding for information technology

2) Lack of access to telehealth for rural centres

3) Lack of computer literacy and access

4) Lack of recognition about what benefits tools can give

5) Not enough databases or data warehouses that make information easily accessible.

"Research can be done in [rural] Saskatchewan and information that is an asset here can be used for Saskatoon or for New Zealand through information technology. So, research is wide open now."

(Front-line Manager)

Examples of Success

Health Matters Magazine, produced by Saskatchewan Association of Health Organizations

NurseONE (Canadian Nurses Portal)

Provincial Cochrane Library Access (courtesy of the Health Quality Council)

Saskatchewan Health Information Resources Partnership (SHIRP)

Health Clips (courtesy of the Health Quality Council)

Theme 5: It's the System!

These are issues at the sectoral or organizational level, i.e., strengths and challenges that occur in policy or in organizational culture. There seemed to be consensus among and across groups that system issues pose a huge challenge. Even if we have enough people with skills and training with all the tools they need, we still need infrastructure support. Each sector has its own role to play, providing appropriate support to sharing and using health research, given broader sectoral roles within the health system.

"Problems in [sharing and using health research] are systemic in nature; you can try...but the system thwarts your efforts."

(Clinician educator)

"Research is on or off depending on your manager's interests."

(Clinician)

Building Blocks

1) Organizational cultures are changing to recognize the need for sharing and using health research

2) More new research-trained graduates entering health and health care

3) Small size and collaborative nature of Saskatchewan

4) Interdisciplinary and cross-jurisdictional teams

"Intellectual property policies are not enabling."
(Researcher)

"I think that university structures need to change. They need to recognize that university people coming together and linking up with people outside the university to produce useful information takes time, it takes many false starts and doesn't necessarily end up in peer reviewed publications but it leads to changes in the community."

(Population Health Researcher)

Stumbling Blocks

1) Universities tenure and reward system is not supportive enough to sharing and using health research

2) Intellectual property policies, as they currently exist

3) Health system structures are big and complex where health regions often work in silos, from each other and within the regions themselves

4) Policy-development is often influenced by political pressures

5) Community and non-government organizations aren't always "top of mind" as an important part of the health system

6) Social service agencies could play a bigger role in bringing focus to prevention and the determinants of health

"There are bigger regions with more resources that smaller regions should be able to access."
(Front-line Manager)

"We're huge funders of research and at the same time a great deal of our work is in trying to explain to the public about that research... to use it to inform policymakers, and to advocate for a better health system and health care. We're major players but we're seen in a very minimum role...we're not always taken particularly seriously."
(Worker in a community-based organization)

Examples of Success

Someone from a rural region described the value of having a student working on a project as a practicum. The new knowledge and skills that this student brought to the project proved invaluable in not only completing a much needed initiative, but also in sharing new knowledge with other staff.

Patient-Centred Interprofessional Team Experiences (PCITE) is one example of an initiative that is bringing diverse groups of health-care professionals together to form best practices for interprofessional teams to ultimately improve the health of communities.

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Moving from Findings to Framework

Using the findings and suggestions from the focus groups, and working with our advisory committee, we drafted a framework with three strategic directions, each with several accompanying key actions. Before finalizing framework, we shared the draft with a broader audience at an invitational March 2007 workshop in Saskatoon. The workshop brought together over 90 people, including focus group participants and other leaders from the health system, government, universities, the health professions, community-based agencies, and the business community.

The workshop's goals were to:

i) share the results of our consultations and the resulting draft framework;

ii) have a range of people from various sectors who are doing "on the ground" knowledge translation present stories about what they do to connect research and practice;

iii) elicit feedback on the proposed strategic directions; and

iv) have participants think about ways to implement the strategic directions and actions.

Workshop participants were generally supportive of the draft strategic directions; their feedback focused mainly on providing guidance for implementing the framework. Based on that feedback, we made some changes to the wording of the strategic directions and actions. We also made the more major change of adding a set of guiding principles, intended to provide the context and assumptions necessary to support successful implementation of the strategic directions.

The final framework, presented in the next section, consists of three components: a) guiding principles; b) strategic directions and actions; and c) implementation guidelines. The framework is intended to be a template for organizations to follow for building their capacity for knowledge translation. Not all parts will apply to all organizations. Also, we recognize that adopting all of the actions would be a very ambitious goal, so we recommend that organizations select one or two items of highest priority to their work on which to move forward.

Increasing capacity to share and use research in Saskatchewan will lead to social, health and economic benefits for our province. SHRF will be interested to hear about the experiences of organizations in adopting the framework and the improvements that result. As part of our ongoing commitment to evaluation, over the coming months and years we will be collecting your stories and experiences in this area, and sharing them with others.

To all of our focus group and workshop participants, our advisory committee, and those who read and commented on various stages of our work, we say a heartfelt thank you. Your interest and enthusiasm helped us to build this "Health Research in Action Framework," which we sincerely hope will strengthen the connections between research and practice – from policies to products to services.

Health Research in Action:
A Framework for Building Capacity to Share and Use Health Research

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A Framework for Building Capacity to Share and Use Health Research

Guiding Principles

a. Knowledge translation, or sharing and using health research, is an important function that needs nurturing to ensure that research contributes strongly to improving the health and well-being of citizens.

b. Knowledge translation involves complex exchanges, whereby research influences real life and real life influences research, and occurs via many different valid and valuable connecting processes and pathways.

c. Successful implementation of the "Health Research in Action Framework" will depend on many agencies investing more resources or reallocating resources in building knowledge translation capacity.

d. There are opportunities for knowledge translation at various stages of research, from the earliest idea stages to the research itself to the outcomes stages.

e. Research requires special training, certain aptitudes, and protected time; while researchers should engage in knowledge translation in the interests of relevance and impact, they also need the support of others with special skills in knowledge translation.

f. There are already people who, as a key part of their jobs, foster and engage in sharing and using health research and also many agencies that devote attention to sharing and using health research – these are strengths on which to build.

g. The framework is intended to be used in a manner that is responsive, respectful and inclusive, adhering to ethical standards and culturally sensitive approaches.

Implementation Guidelines

This framework, with its guiding principles and its strategic directions and actions, is a tool to facilitate joint planning and action for strengthening knowledge translation capacity – it's a template for developing specific plans within and across organizations.

The "Findings" section of the report provides many concrete examples of successful knowledge translation, which should be helpful in fleshing out the framework to meet organizations' particular goals and needs.

The framework is deliberately broad so that very different individuals and organizations will be able to implement any or all of the directions, depending on priorities, resources, and what is already being done in the way of fostering knowledge translation.

Strategic Directions and Actions

1. **Acknowledge and Reward:** Create more recognition for people and organizations involved in sharing and using health research (knowledge translation).

   1.1 Acknowledge knowledge translation in already existing positions by including knowledge translation duties in job descriptions, performance plans and promotion standards.

   1.2 Create special positions devoted to knowledge translation (e.g., knowledge brokers, liaison officers).

   1.3 Explicitly address knowledge translation in project plans, strategic plans, research plans and budgets.

   1.4 Create special awards to recognize knowledge translation.

2. **Educate and Support:** Support people in developing and applying skills and training that enable sharing and using health research (knowledge translation).

   2.1 Provide training in research and knowledge translation in the education programs of health professionals.

   2.2 Provide ongoing professional development opportunities related to research and knowledge translation (e.g., special programs, protected time).

   2.3 Develop curriculum and programs to train specialists who foster knowledge translation.

3. **Connect and Engage:** Build and enhance structures that facilitate sharing and using health research (knowledge translation).

   3.1 Create sustainable alliances that facilitate sharing and using health research across multiple organizations and sectors (e.g., networks, communities of practice).

   3.2 Provide access to tools and resources that facilitate sharing and using health research (e.g., work-site computers, decision-making tools, libraries).

   3.3 Create and engage in ongoing opportunities to share health research (e.g., broadly shared publications, research days, involvement in research projects, electronic forums).

   3.4 Create intellectual property policies that foster sharing and using health research.

The framework can apply in many sectors, including:

- University and other Educational Institutions
- Health Service Organizations
- Health Professional Associations
- Funding Agencies
- Government Departments
- Private/Industry
- Community and Non-Government Organizations

Moving in the suggested directions should increase capacity to share and use health research and, in turn, ensure that health research addresses societal needs and contributes even more strongly to health, social and economic benefits.

References:

Canadian Health Services Research Foundation (2006). *Knowledge transfer and exchange to spread evidence for effective interprofessional health care team practice.* Presentation by Janet Helmer at the Canadian Interprofessional Health Collaborative Inaugural Meeting.

Commission on the Future of Health Care in Canada. (2002). *Building on values: The future of health care in Canada.* Ottawa: Health Canada.

Ermine, W., Sinclair, R., . effery B. (2004). *The ethics of research involving Indigenous Peoples: Report of the Indigenous Peoples; Health Research Centre to the Interagency Panel on Research Ethics (PRE).* Regina: Indigenous Peoples' Health Research Centre.

Estabrooks, C. (1999). *Mapping the research utilization field in nursing.* Canadian Journal of Nursing Research, 31, 53-72.

Indigenous Peoples' Health Research Centre, (2005). *Knowledge translation and Indigenous knowledge symposium and consultation sessions: Final report.* Regina: Indigenous Peoples' Health Research Centre.

Kaplan-Myrth, N. & Smylie, J. (2006). *Sharing what we know about living a good life: Summit report.* Regina: First Nations University of Canada.

Landry, R., Amara, N., and Lamari, M. (2001). Utilization of social science research knowledge in Canada. *Research Policy, 30, 333-349.

Lavis, J. Lomas, J., Hamid, M. & Sewankambo, N.K., (2006). Assessing country-level efforts to link research to action. *Bulletin of the World Health Organization, 84, 620-628.*

Lomas, J. (1997). *Improving research dissemination and uptake in the healthsector: Beyond the sound of one hand clapping.* McMaster University Centre for Health Economics and Policy Analysis, Policy Commentary, C97-1.

Rich, R. (1991). Knowledge creation, diffusion, and utilization: Perspectives of the founding editor of Knowledge. *Knowledge, 12 (3), 319-337.*

Rich, R. (1997). Measuring knowledge utilization: Processes and outcomes. *Knowledge and Policy: The International Journal of Knowledge Transfer and Utilization, 10(2), 11-24.*

Saskatchewan Health (2004). *Saskatchewan health research strategy.* Regina: Saskatchewan Health.

Stone, D., Maxwell, S., & Keating, M. (2001). *Bridging research and policy.* Warwick University: UK Department for International Development.

List of Web sites

Alberta Heritage Foundation for Medical Research
www.ahfmr.ab.ca

Canadian Institutes of Health Research
www.cihr-irsc.gc.ca

Canadian Health Services Research Foundation
www.chsrf.ca

Global Forum for Health Research
www.globalforumhealth.org

Health Quality Council
www.hqc.sk.ca

Indigenous Peoples' Health Research Centre
www.iphrc.ca

Manitoba Centre for Health Policy
http://www.umanitoba.ca/centres/mchp/

Michael Smith Foundation for Health Research
www.msfhr.org

Nova Scotia Health Research Foundation
www.nshrf.ca

Search Canada
www.searchca.net

World Health Organization
http://www.who.int/

Appendices

Appendix A: SHRF Advisory Committee on Knowledge Translation Capacity Building 2006-07

Liz Harrison (CHAIR)
Associate Dean, Physical Therapy and Interprofessional Health Sciences Education, University of Saskatchewan

Karen Barber
Program Director, Health Quality Council

Maureen Bingham
Director of Linkage and Exchange, Health Quality Council

Lauren Black
Senior Policy Analyst, Saskatchewan Health (Policy and Planning Branch)

Laurel Duczek
Director, Strategic Health Information & Planning Services, Saskatoon Health Region

Mary Klaassen
Client Advocate, The Canadian Cancer Society in Saskatchewan

Jerome Konecsni
President and CEO, GenomePrairie

Derrick Larsen
Executive Director, Research and Performance Support, Regina Qu'Appelle Health Region

Tom McIntosh
Research Faculty, Saskatchewan Population Health and Evaluation Research Unit, University of Regina

Dave Nelson
Executive Director, Canadian Mental Health Association, SK Division Inc.

Cathie Scott
Director, Knowledge into Action, Calgary Health Region

Caroline Tait
Faculty, Indigenous Peoples' Health Research Centre

Donna Stockdale
Nurse Epidemiologist, Population Health Unit, Athabasca, Keewatin Yatthé and Mamawetan Churchill River Health Authorities

Diane Waterer
Executive Director, Heart and Stroke Foundation of Saskatchewan

Bruce Waygood
University Co-ordinator of Health Research, Office of the Vice-President Research, University of Saskatchewan

Thanks also to Linda Dewhirst (formerly of Saskatchewan Health) and Janet Smylie (Indigenous Peoples' Health Research Centre) who both served on the committee before pursuing other opportunities outside the province.

Appendix B: List of Organizations Invited to Participate in Focus Groups

Aboriginal Nurses Association of Canada

Ag-West Bio Inc.

AIDS Saskatoon

All Nations Hospital

Alzheimer Society of Saskatchewan

Arthritis Society

Balcarres Integrated Care Centre

Battlefords Union Hospital

Battlefords Tribal Council

Botting Leadership & Development Corporation

Canadian Association for Drugs and Technology in Health

Canadian Cancer Society in Saskatchewan

Canadian Centre for Health and Safety in Agriculture

Canadian Light Source Inc.

Canoe Lake First Nation

Community University Institute for Social Research

Consumer Advisory Council of the Canadian Arthritis Network

Cypress Health Region

Diabetes Association

Federation of Saskatchewan Indian Nations

First Nations University of Canada

Five Hills Health Region

Four Directions Community Health Centre

Gabriel Dumont Institute of Native Studies and Applied Research

Golden Prairie Home

Health Quality Council

Heart and Stroke Foundation of Saskatchewan

Heartland Health Region

Indigenous Peoples' Health Research Centre

Keewatin-Yatthe Health Authority

Kelsey Trail Health Region

Lakeside Medical Clinic

Loon Lake Hospital

Lung Association of Saskatchewan

Mental Health Association

Multiple Sclerosis Society

National Aboriginal Women's Health & Healing Research Group

Northern Inter-Tribal Health Authority

Northern Medical Services

Prairie North Health Region

Prairie Region Health Promotion Centre

Prairie Womens' Health Centre of Excellence

Prince Albert Grand Council

Prince Albert Parkland Health Region

Regina General Hospital

Regina Qu'Appelle Health Region

Royal University Hospital

Saskatchewan Association of Licensed Practical Nurses

Saskatchewan Cancer Agency

Saskatchewan Health

Saskatchewan Health Information Network

Saskatchewan Health Information Resources Partnership

Saskatchewan Industry and Resources

Saskatchewan Institute of Public Policy

Saskatchewan Population Health and Evaluation Research Unit

Saskatchewan Prevention Institute

Saskatchewan Registered Nurses Association

Saskatchewan Seniors Mechanism

Saskatchewan Union of Nurses

Saskatoon Chamber of Commerce

Saskatoon City Hospital

Saskatoon Community Clinic

Saskatoon Health Region

Saskatoon Regional Economic Development Authority

Saskatoon Tribal Council

SIAST Wascana Campus

Strategic Health Information and Planning Services

Sun Country Health Region

Sunrise Health Region

The StarPhoenix

University of Regina

University of Saskatchewan

Victoria Union Hospital

Yorkton Tribal Council

Knowledge translation simply means 'applying what we learn' (operational definition). This guide builds upon and connects to the SHRF discussion paper, Health Research in Action: Towards a Provincial Capacity-Building Framework. The four key foci of the group interview are: 1) KT needs, 2) KT responsibilities, 3) KT strengths in Saskatchewan, and 4) KT challenges and gaps that knowledge users and researchers face in Saskatchewan.

- What does support for KT look like for researchers and knowledge users? Informational, practical and structural
- What people say will be less logical, less organized, and less thoughtful than we expect
- Goal is to move from general to more specific, from positive to negative, from challenges to actions
- 10 to 12 questions recommended for a 1 ½ to 2 hour focus group

Focus Group Interview Guide: formal; structured

Why do this?
First hand experience of knowledge translation

What do we want to find?
Key issues re: needs, responsibilities, strengths & challenges people face in KT in SK

What do we want participants to experience?
1. respect & recognize their wisdom
2. inclusive participation
3. with/for not to/on

Your perspective of knowledge translation or applying what we learn as a researcher or knowledge user in Saskatchewan:

FG Purpose:
To identify needs and responsibilities in knowledge translation.
To identify strengths to build upon and gaps that need to be addressed.

Prep work:
Participants asked to read the SHRF Discussion Paper
Introduction to focus group by SHRF CEO

KT Processes & Pathways:

Focus group is a guided free-flowing group conversation (indepth information gathering of opinions, views & experiences) focused on specific issues in KT

Move through together as a group in an ordered way that everyone can follow & understand

Objective:
"the what"

1. What are some examples of 'success' stories in sharing and using health research in Saskatchewan?

2. From these examples, what existing strengths do we have in sharing and using health research?

In contrast
3. What are some of the conditions you face in sharing and using research that are NOT what you want to be? (what conditions need to be in place to ensure that we share and use health research?)

Shared view of the reality that is KT in SK

Objective:
As many different perspectives as possible

There are many diverse yet everyday common experiences in KT in SK

4. What are the day to day challenges or unique issues you face in sharing and using research knowledge in Saskatchewan?

5. What are some of the obstacles that make applying research in Saskatchewan difficult for knowledge users and researchers?

Everyday KT situations and problems people deal with and confront

Reflective:
Everything out on the table about KT in SK

6. Who should lead in actions or strategies to increase our capacity to share and use health research in Saskatchewan?

7. What is your part or role in ensuring that research knowledge is shared and used?

Group feelings versus hidden emotions

Big picture

Interpretive: explanations & meaning
Beyond individualism or isolation

As you think over what everyone has said
8. What are one or two key actions or strategies that would help increase our capacity to use health research?

9. Who should lead this particular action or strategy?

Free to see and discuss issues

Action that takes aim at challenges / obstacles

Closing . . .

10. Is there anything else we need to know or consider?

Appendix C: Focus Group Interview Guide — May and June, 2006

Knowledge translation simply means 'applying what we learn' (operational definition). This guide builds upon and connects to the SHRF discussion paper, Health Research in Action: Towards a Provincial Capacity-Building Framework. The four key foci of the group interview are: 1) KT needs; 2) KT responsibilities; 3) KT strengths in Saskatchewan; and 4) KT challenges and gaps that knowledge users and researchers face in Saskatchewan.

- What does support for KT look like for researchers and knowledge users? informational, practical and structural
- What people say will be less logical, less organized, and less thoughtful than we expect.
- Goal is to move from general to more specific, from positive to negative, from challenges to actions.
- 10 to 12 questions recommended for a 1 ½ to 2 hour focus group.

Focus Group Interview Guide: formal; structured

Why do this? First hand experience of knowledge translation **What do we want to find?** Key issues re: needs, responsibilities, strengths & challenges people face in KT in SK. **What do we want participants to experience?** 1. respect & recognize their wisdom 2. inclusive participation 3. with/for not to/on	Your perspective of knowledge translation or applying what we learn as a researcher or knowledge user in Saskatchewan: **FG Purpose:** To identify needs and responsibilities in knowledge translation. To identify strengths to build upon and gaps that need to be addressed. **Prep work:** Participants asked to read the SHRF Discussion Paper Introduction to focus group by SHRF CEO	*KT Processes & Pathways:* 	Focus group is a guided free-flowing group conversation (indepth information gathering of opinions, views & experiences) focused on specific issues in KT. Move through together as a group in an ordered way that everyone can follow & understand
Objective: "the what"	1. What are some examples of 'success' stories in sharing and using health research in Saskatchewan? 2. From these examples, what existing strengths do we have in sharing and using health research? In contrast . . . 3. What are some of the conditions you face in sharing and using research that are NOT what you want to be? (what conditions need to be in place to ensure that we share and use health research?)		Shared view of the reality that is KT in SK.
Objective: As many different perspectives as possible. There are many diverse yet everyday common experiences in KT in SK.	4. What are the day to day challenges or unique issues you face in sharing and using research knowledge in Saskatchewan? 5. What are some of the obstacles that make applying research in Saskatchewan difficult for knowledge users and researchers?		Everyday KT situations and problems people deal with and confront
Reflective: Everything out on the table about KT in SK	6. Who should lead in actions or strategies to increase our capacity to share and use health research in Saskatchewan? 7. What is your part or role in ensuring that research knowledge is shared and used?		Group feelings versus hidden emotions Big picture
Interpretive: explanations & meaning Beyond individualism or isolation	As you think over what everyone has said . . . 8. What are one or two key actions or strategies that would help increase our capacity to use health research? 9. Who should lead this particular action or strategy?		Free to see and discuss issues Action that takes aim at challenges / obstacles
Closing . . .	10. Is there anything else we need to know or consider?		